Teddington Direct River Abstraction

Preliminary Environmental Information Report

Chapter 1 – Introduction

Volume: 1

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1. Introduction

1.1 Overview

1.1.1 Thames Water Utilities Ltd (hereafter referred to as 'Thames Water' or the 'Applicant') has prepared this Preliminary Environmental Information (PEI) Report as part of the Environmental Impact Assessment (EIA) for the proposed Teddington Direct River Abstraction Project (hereafter referred to as 'the Project').

1.1.2 Thames Water is a private company with 16 million customers (water and waste water) that supplies around 2,600 million litres per day (Ml/d) of water to around 10 million people and 220,000 businesses and is the UK's largest water and wastewater services company. Its activities span a large area of south-east England, over six separate Water Resource Zones. These areas include London as well as parts of Berkshire, Gloucestershire, Hertfordshire, Kent, Oxfordshire, Surrey and Wiltshire; from Cirencester in the west to Dartford in the east and from Banbury in the north to Guildford in the south, covering over 13,000 square kilometres (km^2).

1.1.3 Teddington Direct River Abstraction is a vital drought resilience project aiming to address a forecast deficit in water supply during drought conditions, which will deliver up to 75Ml/d of raw water supply during periods of drought.

1.1.4 The Secretary of State (SoS) for Environment, Food and Rural Affairs gave a direction in relation to the Project under section 35 of the Planning Act 2008 on 22 December 2023 (Department for Environment, Food and Rural Affairs, 2023). As such, the Project is required to be consented by way of a Development Consent Order (DCO).

1.1.5 Details of the Project are provided in Chapter 2: Project Description. The area within which the construction activities and permanent infrastructure associated with the Project will be located is currently referred to as the draft Order limits; these are shown on Plate 1.1 and described under Section 2.3. Figure 1.1 in Volume 2 PEI Report Figures also illustrates the draft Order limits at a larger scale.

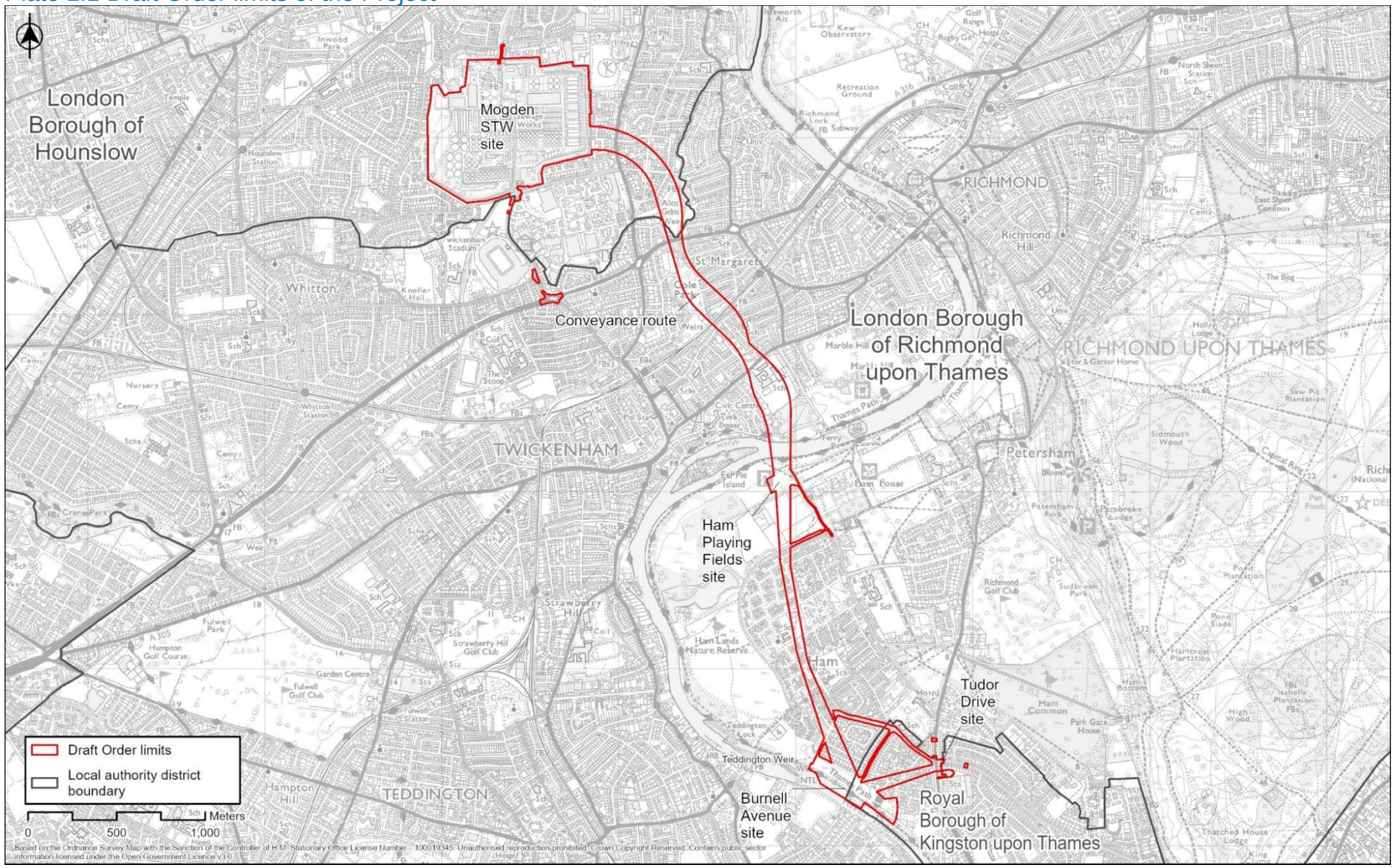
1.1.6 The Project would deliver enhanced drought resilience benefits from 2033 (for predicted 1-in-200 year drought events). This is required to meet water demand for a projected population of over 12 million people in London by 2050, with growth predicted of over 100,000 people a year. The Project is a strategically important water resource due to the social, economic and environmental significance of London, the south of England and the UK. It will play a critical role in meeting the water resources needs and resilience of this large geographical region.

1.1.7 The Project will abstract water from the River Thames and convey it into an existing tunnel (the Thames Lee Tunnel). The water will then be transferred to Lockwood Pumping Station, part of Thames Water's Lee Valley reservoir

system in north-east London, to be treated to become drinking water. To compensate for the water abstracted, recycled water from a new tertiary treatment plant (TTP) within the existing Mogden Sewage Treatment Works (STW) site boundary, is to be discharged downstream to balance the river flow. The TTP would treat a portion of the final effluent to a higher standard than the final effluent of the STW discharged to the tidal River Thames from the Mogden STW. A new recycled water conveyance tunnel will be built to transfer recycled water from the TTP to the freshwater River Thames, upstream of Teddington Weir and downstream of the proposed abstraction point.

1.1.8 The water recycling element of the Project, which discharges into the river at Teddington, would operate intermittently and provide up to a maximum of 75Ml/d only when required. Modelling scenarios, looking at resource demand, river levels, climate change and drought scenarios, have indicated that the Project is most likely to operate during low river water flow periods in the River Thames and on average once in every two years, primarily between the months of August to November. Further detail on the operation of the Project is provided in Section 2.8.

Plate 1.1 Draft Order limits of the Project



1.2 Project vision, design principles and objectives

1.2.1 A project vision has been developed by the Applicant (Thames Water, 2024b) to capture the ambitions for the Project as follows:

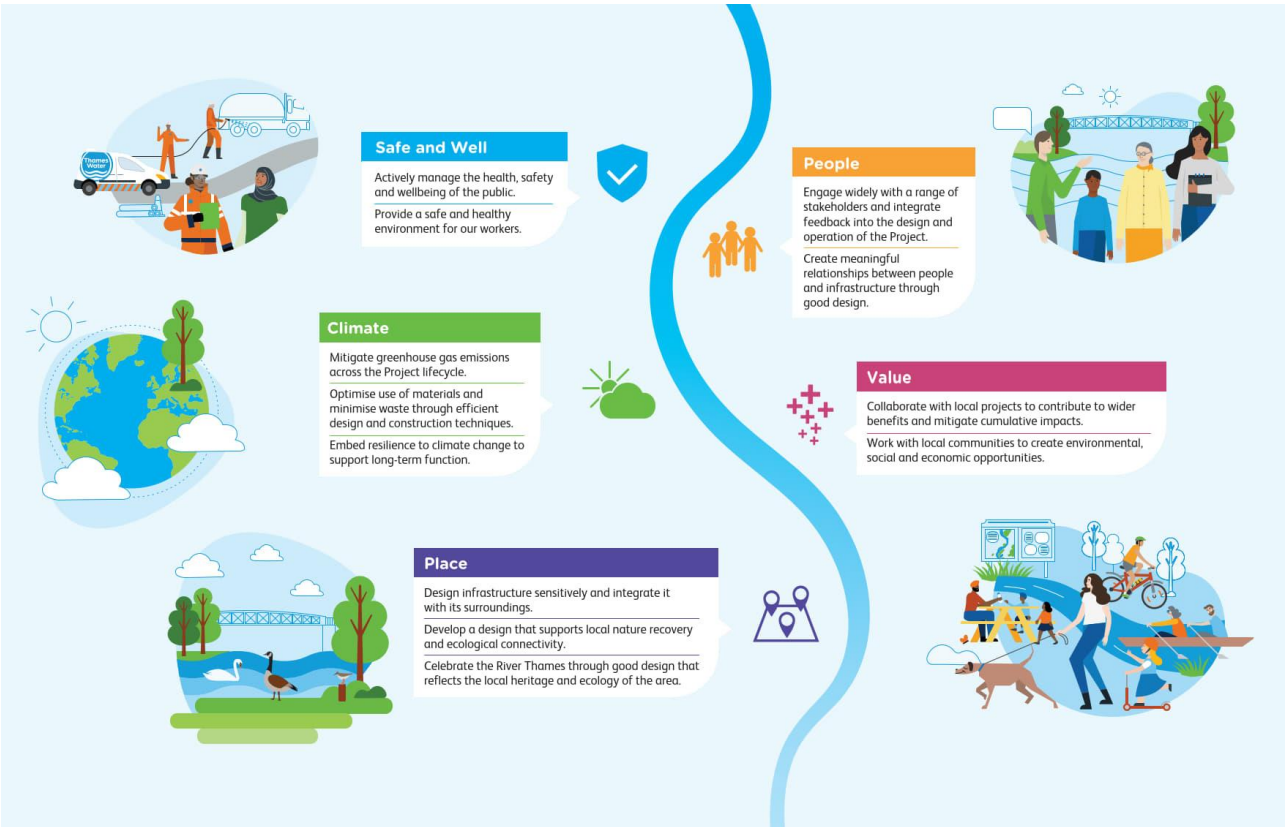
'*The Project aims to create a sustainable approach to water resilience for customers in London. It will address London's supply challenges by providing a new resilient source of water when it's most needed. It will protect and enhance the environment by protecting the health of the River Thames and will leave a positive legacy through enhancements to the local environment*.'

1.2.2 Within Thames Water's catchment, the London Water Resource Zone includes surface water and groundwater abstractions. The zone is supplied by surface water resources, whereby water from the River Thames and River Lee is abstracted and stored in large reservoirs in west London and north-east London, before treatment at a water treatment works and subsequent distribution. Storage in west London is spread across 10 reservoirs and the Lee Valley reservoir complex in north-east London, is spread over 13 reservoirs. Supply in the south-east of London is dominated by groundwater sources, with around 30 sources across the area.

1.2.3 The region has a large population and receives comparatively little rainfall compared to other UK regions, making it water-stressed. While new sources of groundwater are being identified, these alone would not yield sufficient additional supply to ensure a secure and sustainable water supply for future generations.

1.2.4 The design of the Project has been developed in accordance with the National Infrastructure Commission design principles (NIC, 2020) and the All Company Working Group (ACWG) publication on Design Principles (ACWG, 2022). The five ACWG design principle themes have been used and developed further into a Project-specific design vision and set of draft design principles which are shown in Plate 1.2.

Plate 1.2 Draft Project design principles



1.2.5 Further information on the design vision and the draft design principles can be found in the Teddington Direct River Abstraction, Draft Design Principles (Thames Water, 2024b), available as part of the statutory consultation documents.

1.2.6 A staged design process is being following through the design development, consenting, procurement, construction and operational stages of the Project.

1.2.7 The design evolution has been an iterative process based on the five ACWG design principal themes and the draft design principles as indicated above. As the Project develops, specific design principles of the Project will evolve in response to feedback from stakeholders and as the design matures. An independent design panel was appointed in early 2025 to review the approach to design and ensure design opportunities are maximised.

1.3 Purpose of the PEI Report

1.3.1 The purpose of this PEI Report, as described in Planning Inspectorate (PINS) Advice Note Seven (PINS, 2020), is to actively engage with consultees (both specialist and non-specialist) to understand the likely environmental effects of the Project and help to inform their consultation responses on the Project during the pre-application stage.

1.3.2 This PEI Report has been produced to comply with Regulation 12 of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, which defines preliminary environmental information as:

'*information referred to in regulation 14(2) which:*

a. Has been compiled by the applicant; and

b. Is reasonably required for the consultation bodies to develop an informed view of the likely significant environmental effects of the development (and of any associated development).'

1.3.3 PINS Advice Note Seven (PINS, 2020) states in paragraph 8.4 '*There is no prescribed format as to what PEI should comprise and it is not expected to replicate or be a draft of the ES. However, if the Applicant considers this to be appropriate (and more cost-effective) it can be presented in this way. A good PEI document is one that enables consultees (both specialist and non-specialist) to understand the likely environmental effects of the Proposed Development and helps to inform their consultation responses on the Proposed Development during the pre-application stage.*'

1.3.4 The Nationally Significant Infrastructure Projects: 2024 Pre-application Prospectus (PINS, 2024a) provides guidelines and procedures for pre-application processes. This PEI Report provides a '*preliminary*' assessment of the Project and follows the guidelines of the prospectus. The prospectus provides essential information for stakeholders involved in nationally significant infrastructure projects, ensuring that all necessary steps are followed for successful project planning and execution. This PEI Report identifies the likely significant effects and the envisaged mitigation measures that may be applied. These effects will be further considered through the EIA process, where additional mitigation may be developed as the design progresses. Preliminary findings of likely significant effects at this stage may ultimately be determined as not significant once the mitigation is finalised and presented in the Environmental Statement (ES) that will be submitted as part of the DCO application.

1.3.5 Therefore, this PEI Report does not constitute a draft ES but follows the structure of an ES that will be produced. The PEI Report outlines the current design and preliminary environmental assessments of potential likely significant effects undertaken to date. The ES that will be submitted with the DCO application will provide the final assessment of likely significant effects, having regards to statutory consultation feedback, further ongoing survey outcomes and design updates informed by the ongoing EIA process.

1.4 Consultation and engagement

1.4.1 Consultation is a key part of the preparation of DCO applications and the EIA process. To date, this has comprised:

a. Engagement through the establishment of Technical Working Groups with stakeholders including but not limited to the Environment Agency, Natural

England, Historic England and the Port of London Authority. Over 50 technical workshops have been held since 2021 covering engineering design; terrestrial ecology and biodiversity net gain; fisheries; water quality; aquatic modelling; aquatic ecology; regulatory assessments; temperature; navigation; and historic environment

b. Consultations with customers, stakeholders and regulators on the proposals outlined in the draft Water Resource Management Plan 2024

c. Non-statutory public consultation seeking feedback on the Project site options appraisal and infrastructure in autumn 2023. The feedback received has been considered in the development of the Project

d. Public information events to provide details on design changes with the community

e. Project-specific local planning authority engagement with the London Borough of Hounslow, London Borough of Richmond upon Thames and Royal Borough of Kingston upon Thames, beginning in January 2024

f. Engagement with other stakeholders such as third party utility providers, Network Rail, London Fire Brigade, business owners and recreation groups for example; where necessary is ongoing

1.4.2 This PEI Report is part of a suite of documents which have been made available for statutory consultation on the Project and has been prepared to support consultees in developing an informed view of the potential likely significant environment effects of the Project. Throughout the development of the PEI Report as well as the Scoping Report (Thames Water, 2024c), stakeholder engagement has continued to inform the EIA process.

1.4.3 This statutory consultation will run over a ten week period from 17 June 2025 to 26 August 2025 to allow stakeholders the opportunity to review the proposal and provide feedback. Thames Water invites comments on the Project and the environmental issues that have been presented in this PEI Report.

1.4.4 Once the statutory consultation period has closed, the Project will carefully analyse all the responses received within the consultation period. Feedback received by stakeholders, including the regulatory authorities and affected communities, will be considered in the further development of the design and mitigation measures. As part of the DCO application, a Consultation Report will be published and made available to the public, explaining how feedback has been considered in the development of the design of the Project.

1.4.5 For more details on consultation and engagement for the Project to date, see Section 4.5.

1.5 Scope and content of the PEI Report

1.5.1 This PEI Report and associated figures and appendices are split into three Volumes, as follows:

a. Volume 1 PEI Report

b. Volume 2 PEI Report Figures

c. Volume 3 PEI Report Appendices

1.5.2 Summaries for each of the assessed environmental aspects in this PEI Report are provided in the Non-Technical Summary (NTS) to help customers and stakeholders understand the Project and the preliminary environmental assessments.

1.5.3 The structure of this PEI Report can be found in Table 1.1. Each of the technical chapters presents the preliminary environmental information for the aspect in question. This covers a description of the proposed environmental scope and baseline conditions; key receptors and likely significant effects; the proposed mitigation measures; and a description of the potential likely significant residual effects following implementation of the proposed mitigation.

1.5.4 This PEI Report has been prepared in accordance with Advice Note Seven (PINS, 2020), which states that the EIA process should be proportionate and should only scope in aspects likely to result in significant environmental effects. The Scoping Opinion (PINS, 2024b) sets out what PINS recommends should be scoped in and out of the environmental assessment following review of the Scoping Report (Thames Water, 2024c). Key PINS comments per aspect and Project responses have been provided in each chapter of the PEI Report.

Table 1.1 Structure of the PEI Report

Chapter	Contents
1 Introduction	Sets out the background, Project overview and the purpose and structure of the PEI Report.
2 Project Description	Sets out the proposed elements and an overview of the construction techniques, operational parameters and the environmental context of the site.
3 Consideration of Alternatives	Outlines the alternatives considered as part of the design process to date.
4 Approach to Environmental Assessment	Provides an overview of the EIA methodology, scope, draft Order limits, consultation and engagement held to date for the Project, specifically relating to the EIA.
5 to 18 Environmental Aspects	Outline of the existing environment and baseline conditions, sensitive receptors and potential environmental effects, assessment methodology, mitigation and consultation for the following aspects: • Chapter 5: Water Resources and Flood Risk • Chapter 6: Aquatic Ecology • Chapter 7: Terrestrial Ecology • Chapter 8: Historic Environment • Chapter 9: Townscape and Visual • Chapter 10: Ground Conditions and Contaminated Land • Chapter 11: Materials and Waste • Chapter 12: Traffic and Transport • Chapter 13: Air Quality • Chapter 14: Noise and Vibration • Chapter 15: Socioeconomics, Community, Access and Recreation • Chapter 16: Human Health • Chapter 17: Carbon • Chapter 18: Climate Change
19 Cumulative Effects	Sets out the approach to assessment of cumulative effects with other proposed developments, and the potential environmental effects.
20 Next Steps	Provides a summary of the proposed scope of the ES and its structure. Sets out the next steps in the EIA process.

1.5.5 Volume 2 PEI Report Figures and Volume 3 PEI Report Appendices, which provide further information in the form of figures/photomontages and technical information respectively, support the initial findings presented in the PEI Report chapters set out above.

1.6 Next steps

1.6.1 This PEI Report will provide members of the public, statutory consultees and other stakeholders with the information to develop an informed view of the likely significant effects of the Project identified on a preliminary basis and based on the information available to date. Feedback from the statutory consultation (including in relation to the content of this PEI Report) will further inform and support the ongoing design and assessments of the Project.

1.6.2 Further detail is provided in Chapter 20: Next Steps, including more detail on how to have your say in the statutory consultation.

1.7 References

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